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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/523,820	03/13/2000	Michael A. Fetcenko	OBC-99	6627

24963 7590 06/29/2004

ENERGY CONVERSION DEVICES, INC.
2956 WATERVIEW DRIVE
ROCHESTER HILLS, MI 48309

EXAMINER

NGUYEN, CAM N

ART UNIT PAPER NUMBER

1754

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/523,820

Applicant(s)

FETCENKO ET AL.

Examiner

Cam N Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on April 7, 2004 (an amendment/response) & an RCE filed on 3/24/04
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-30,32-55 and 90-106 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-30 and 32-55 is/are allowed.
- 6) ☒ Claim(s) 90-106 is/are rejected.
- 7) ☒ Claim(s) 92-96 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Status of an RCE Application

1. A request for continued examination (RCE) under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after the final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on 3/24/04 has been entered.

2. Applicants' remarks and amendments, filed on April 7, 2004, have been carefully considered. Claims 2, 31, & 80-89 have been canceled. New claims 103-106 have been added.

Claims 1, 3-30, 32-55, 90-100, & 103-106 are now pending in this application.

Claim Objections

3. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 103-106 have been renumbered 101-104, respectively.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 90-91 & 97-100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mesters et al., "hereinafter Mesters", (U.S. Pat. 4,725,573) in view of Ovshinsky et al., "hereinafter Ovshinsky", (U.S. Pat. 5,840,440).

Mesters discloses a catalyst containing metallic copper and nickel as active component carried on an inert refractory carrier, wherein the copper-nickel-alloy is present on the carrier in small metal particles with an average particle size of less than 14 nm (14 nm = 140 Å) (see col. 11, claim 1). Suitable inert refractory carriers include zirconium dioxide and titanium dioxide (see col. 2, ln 62- col. 3, ln 2). Mesters further discloses the nickel alloyed in the metallic copper is distributed so homogeneously, that it is present in copper-nickel particles containing at most 30% by weight of metallic nickel, based on the total weight of metallic copper and metallic nickel (see col. 3, ln 43-48).

Mesters discloses a catalyst, except for the nickel alloy comprising the instantly claimed metals. It would have been *prima facie obvious* to one of ordinary skill in the art at the time the invention was made to utilize a known TiNi type alloy containing modifier elements which may be selected from the group consisting of Ni, Cr, Co, Mn, Mo, Nb,

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Fe, Al, Mg, Cu, Sn, Ag, Zn, Pd, and mixtures or alloys thereof as taught by Ovshinky (see Ovshinky at col. 6, ln 43-48) to make a useful catalyst in view of the advantage that the hydrogen storage materials produced by using this TiNi type alloy containing these modifier elements comprising the crystallite size of less than about 200 Angstroms and more particularly less than about 100 Angstroms (see Ovshinsky at col. 6, ln 1-4), which applicants desired. Note that the claimed elements (Co, Mn, Fe, Al, Ti, and Sn) are met by the teaching of the reference because they fall within the listing of suitable modifier elements of the reference.

The instantly claimed metal particulate particle size is met by the teaching of the reference since the disclosed particle size range encompasses the claimed particle size range (see Mesters at col. 11, claim 1).

Allowable Subject Matter

6. Claims 1, 3-30, 32-55, & 101-104 are not being rejected the art rejection because they contain allowable subject matter. The following is a statement of reason(s) for the indication of allowable subject matter:

The prior art does not disclose or fairly suggest a catalyst powder or particle comprising a nickel or nickel alloy particulate having average particle size of between about 10 and about 70 Angstroms and in combination with the requirement of the particulate dispersed in a support matrix (as recited in claims 1 & 30).

There is no motivation to combine the teachings of the references together.

7. Claims 92-96 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art does not disclose or fairly suggest a catalyst requiring a metal particulate having an average particle size having the claimed ranges and in combination with the requirement of the nickel alloy comprising at least one element selected from the group consisting of Al, Co, Sn, Mn, Ti, and Fe (as recited in claim 90).

Response to Amendment/Arguments

8. Applicants' amendment/response filed on 4/07/04 has been fully considered, but not deemed persuasive for the following reasons.

It is considered the rejection over Mesters in view of Ovshinsky is still applicable under a 103 for claims 90-91 & 97-100 because Mesters discloses a catalyst containing metallic copper and nickel (which is the claimed nickel alloy) carried on an inert refractory carrier, wherein the copper-nickel-alloy is present in small metal particles with an average particle size of less than 14 nm (14nm = 140A) (see Mesters at col. 11, claim 1). Applicants claiming an average particle size of less than about 100 Angstroms, which falls within the disclosed average particle size range of the reference.

9. This is an RCE of applicant's earlier Application No. 09/523,820. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had

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been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Citations

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 Form prepared attached. All references are cited for related art.

Conclusion

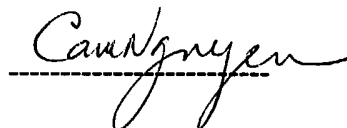
11. Claims 1, 3-30, 32-55, & 90-104 are pending in the application. Claims 90-92 & 97-100 are rejected. Claims 93-96 are objected. Claims 1, 3-30, 32-55, & 101-104 are allowed.

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Cam Nguyen, whose telephone number is (571) 272-1357. The examiner can normally be reached on M-F from 9:30 am. to 6:00 pm.

The appropriate fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to telephone number (571) 272-1700.

A handwritten signature in cursive script, appearing to read "Cam Nguyen", written over a horizontal dashed line.

Cam Nguyen

Primary Examiner

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Nguyen/cnn *can*

June 28, 2004